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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,019	01/30/2002	Michel Ahouanto	A34939-PCT-USA-A	7861

21003 7590 12/15/2003

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/061,019

Applicant(s)

AHOUANTO ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-29-02. 6) ☐ Other: _____

1. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In the equations at the top of page 11 of the specification, reference is made to $0 < \beta_0 < \alpha_0 < 180$ degrees. However, β_0 is defined earlier in the specification as being substantially 90 degrees whereas α_0 seems to have smaller values such as the exemplary 9 degrees. Therefore, the above noted relationship between these variables is inconsistent with the actual values thereof referenced in the specification. Because of these inconsistencies, the manner of calculating the values for β_1 and α_1 using the page 11 equations is not presented in a manner that the ordinary artisan is enabled to practice the invention without an undue burden of experimentation. Applicant is also advised that if any changes are made to the disclosure, adequate descriptive support thereof in the original disclosure should be shown.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, step (b), no antecedent has been established for "the annular bead elements" or "the profiled elements" or "the bead reinforcement armatures".

In claim 1, step (c), no antecedent has been established for "said drum T".

In claim 1, step (d), no antecedent has been established for "the profiled elements and rubber layers", it further being noted that these are apparently different

from “the profiled elements” defined in step (b), this creating additional potential confusion.

In the last line of step (d) of claim 1, it is not clear what is meant by $\pm\gamma_1$ ($\mp\gamma_1$), and especially, it is not clear what limitation is intended by the matter in parentheses. Further, it is not clear if these +/- references (and the order thereof, i.e. \pm vs. \mp) is intended to denote any specific requirement for the direction of the cords in the crown ply relative to the cords in the immediately underlying carcass ply. In other words, it is not clear if the present language is defining or requiring that the at least one crown ply have cords at the same angle direction as the underlying carcass cords or is the claim simply requiring that the cords can be in either direction. It will be assumed for purposes of this office action that the claims read on the cords being in either direction (but within a certain degrees difference in absolute terms) but clarification is required. Further, if there is more than one crown ply, is the use of \pm intended to define or require that the e.g. two plies be at two opposite angles? Analogous ambiguities are presented by the reference to $\pm\gamma_2$ ($\mp\gamma_2$) in claim 5.

In claim 1, step (e), no antecedent has been established for “the rubber mix(es).”

In dependent claim 2, the initial recitation that “the diameter D1 is greater than the diameter D of the building drum” is redundant to the requirement in step (c) of claim 1 (i.e. “increasing the diameter D to a greater diameter D1”), this creating potential for confusion in determining the scope of these claims. It would thus be clearer if the redundant requirement were removed from claim 2 to avoid confusion.

In claim 3, the recitation “the reinforcement elements of which form angles equal

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respectively to 90^0 and $\pm\alpha$ or $\pm\alpha$ and 90^0 with the circumferential direction" is entirely indefinite and confusing.

In claim 4, no antecedent has been established for "the width L_1 ".

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Menell et al. (US 3,525,377).

Menell et al. '377 discloses a tire including a carcass whose cords are radial in the sidewalls and angled in the crown region (note esp. figs. 1-2). Further, crown plies (7, 8) are provided with cords extending at angles that are apparently of the same absolute value as the angle of the carcass cords in the crown region (note that both the carcass and belt cord angles are described as at angles of 5-30 degrees and crossing the cords of the carcass in the crown - this along with the depiction would have suggested or certainly rendered obvious equal absolute values of the angles). Further, as shown in fig. 6, the belt layer 8 extends to an axial width wider than the width of parallelism with the carcass by virtue of triangular rubber pieces 13. This reference thus is reasonably considered to suggest or render obvious a tire consistent with the requirements of claim 5. It is noted that claim 1 (upon which claim 5 depends) defines beads, fillers, profiled elements, etc. that are applied whereas Menell et al. '377 clearly illustrates beads but does not explicitly describe the other elements that are included in the final tire. It however is considered that the claimed elements represent normal and typical elements necessarily included in almost all normal or typical tires, their inclusion in the Menell et al. '377 tire being therefore considered to have been implicit or certainly obvious to the ordinary artisan. Although this reference does not suggest forming this structure using the same methodology as defined in claim 1, it is not seen that this defines a different *tire* than that suggested/rendered obvious by this disclosure as described above.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menell et al. (US 3,568,749) taken in view of Menell et al. (US 3,525,377).

Menell et al. '749 discloses a tire including a carcass whose cords are radial in the sidewalls and angled in the crown region (note esp. figs. 1-2). Further, crown plies (12) are provided with cords extending at angles that are of the same absolute value as the angle of the carcass cords in the crown region (e.g. note fig. 2). As to the axial width of the crown ply being greater than the width of parallelism, it would have been obvious to include triangular rubber pieces beneath the edges of the crown plies in light of Menell et al. '377 which teaches, as shown in fig. 6, the inclusion of triangular rubber pieces to help prevent belt edge detachment (e.g. note col. 3, lines 60+). Such rubber pieces would provide a crown ply width greater than a width of parallelism as claimed. It is noted that claim 1 (upon which claim 5 depends) defines beads, fillers, profiled elements, etc. that are applied whereas Menell et al. '749 clearly illustrates beads but does not explicitly describe the other elements that are included in the final tire. It however is considered that the claimed elements represent normal and typical elements necessarily included in almost all normal typical tires, their inclusion in the Menell et al. '749 tire being therefore considered to have been implicit or certainly obvious to the ordinary artisan. Although Menell et al. '749 does not suggest forming this structure using the same methodology as defined in claim 1, it is not seen that this defines a different *tire* than that rendered obvious from the references as applied above.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Menell et al. (US 3,525,377) or [Menell et al. (US 3,568,749) taken in view of Menell et al. (US 3,525,377)] as applied to claim 5 above, and further in view of Massoubre (US 3,404,721) and/or Fletcher (US 3,613,763).

Claim 6 defines a tire that is very similar to that required by claim 5 with the additional requirement that the belt edges include a short folded up portion. It however is well known in this art to fold over belt edges to help avoid belt edge separation (e.g. note col. 1, lines 55+ of Massoubre) as well as enhance tire performance (note Fletcher), it being considered obvious to provide short folded belt edge regions in light of these teachings.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Travers (US 3,327,753 - cited by applicant) discloses building a tire in cylindrical form on a cylindrical drum including a radial carcass as well as an oblique cord angled belt ply thereon followed by toroidal shaping (e.g. figs. 5-6) during which the radial carcass cords underlying the belt ply become angled. FR 2,178,000 (cited by applicant) discloses building a tire in cylindrical form including an angled ply underlying the crown portion of the carcass, the cord angles shifting during the shaping process (figs. 1-7).

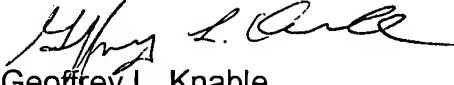
Neither reference, nor any of the other art applied above, however, teaches or renders obvious a process as defined in claim 1 including, in the context of the overall method as claimed, forming a cylindrical blank including all the components of the tire by laying a radial carcass ply, effecting central angle variation of the radial carcass reinforcement by increasing the drum diameter to D1 while using a reinforced and vulcanized shaping ply N laid on the drum, laying the other plies and elements, and bringing the diameter D1 of the cylindrical blank to the toric diameter D2.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
December 8, 2003